



## **Delta States Stroke Network**

## **DSSN REGIONAL ACTION PLAN FISCAL YEARS 2009 AND 2010**

Alabama • Arkansas • Louisiana • Mississippi • Tennessee

### **EXECUTIVE SUMMARY**

In 2004, the Centers for Disease Control initiated funding for a regional stroke network program, including a partnership of the Delta states of Alabama, Arkansas, Louisiana, Mississippi, and Tennessee. The network, originally called the Delta States Stroke Consortium (DSSC), was coordinated by the Alabama Department of Health from 2004-2006. Some of the major accomplishments of the DSSC during this period included development and airing of public service announcements on the signs and symptoms of stroke, and other media campaigns; development of rehabilitation education resources for senior case managers and social workers; dissemination of literature and magnets on signs and symptoms of stroke; training of instructors (including neurologists, paramedics, RNs and flight medical personnel) and presenting courses on the Fundamentals of Acute Stroke Treatment (FAST) program, developed by the University of Alabama's Neurological Institute; development and/or dissemination of position statements on stroke awareness and care; development of ASA's stroke system plan for Alabama; publication of a regional stroke burden document; and development of a web-based CME course.

In 2007, the DSSC held a Regional Public Health Summit to evaluate the first three years of the DSSC and to plan for the future. The outcome of this summit was the consensus decision to develop a plan to revise the goals and directions of the DSSC, including new leadership and a new management structure. The Arkansas Department of Health agreed to take on the role of the coordinating agency to facilitate projects, coordinate interventions, and support the Consortium in achieving its goals; and the organization was renamed the Delta States Stroke Network. The DSSN has brought together state agencies and their partners from thirty organizations to identify and address factors associated with the high rate of strokes in the Delta region. DSSN members have included public health and medical professionals, policy makers, and community health advocates.

The focus of this document is to describe the Regional Action Plan of the Delta States Stroke Network (DSSN).

## THE STROKE BURDEN

The five Delta states of Alabama, Arkansas, Louisiana, Mississippi, and Tennessee are included among the eight southeastern states comprising the "stroke belt," where the stroke death rate is 1.5 times the national average. According to 2006 data from the Centers for Disease Control and Prevention, National Center for Health Statistics, CDC WONDER Online Database, the states of Arkansas, Alabama, Tennessee, Mississippi, and Louisiana rank 1, 2, 3, 4, and 7, respectively, in the stroke death rate in the United States.

Stroke devastates the Delta. The 2006 data from CDC (cited above) paints a disturbing picture:

- Alabama – 46,000 cases, 2,700 deaths
- Arkansas – 32,000 cases, 1,900 deaths
- Louisiana – 39,000 cases, 2,200 deaths
- Mississippi – 27,000 cases, 1,600 deaths
- Tennessee – 59,000 cases, 3,400 deaths

The annual medical cost to treat stroke in the 5-state region totals \$1.2 billion, placing a significant burden on the Medicaid system. (Milken Institute, 2007). The annual estimated Medicaid cost for stroke treatment for the 5-state region totals \$937.9 million (CDC, 2007).

## DSSN GUIDING PRINCIPLES

The focus and structure of the DSSN has accommodated these principles:

1. Assure joint leadership of the DSSN, with a true partnership and an active voice from each state health department.
2. Get input and buy-in at the highest possible levels in each state Health Department.
3. Ensure strategies are consistent with and supportive of strategic plans of each state health department as well as needs of the region as a whole.
4. Focus work on a few, well chosen initiatives that have potential for greatest impact across the region, and build on successes.
5. Undertake projects that are systems and policy based at the highest level.
6. Function in an integrating role, bringing state agencies and their partners together to engage in projects and activities coordinated over time and across the region.
7. Complement State HDSP programs without duplicating or supplanting each other's activities.

## ADMINISTRATION AND MANAGEMENT

- The Principal Investigator /Project Director – has provided overall direction.
- The Project Manager – responsible for managing the daily activities of the program, including coordinating program activities, monitoring program effectiveness, meeting federal grant reporting requirements, facilitating work group meetings, and supporting efforts to assist the Network in achieving its mission.
- The Administrative Assistant – responsible for the clerical support of the DSSN.
- The Steering Committee - voting committee of the network. The committee has been responsible for laying the foundation and rules for the network. Members have included the five Heart Disease and Stroke Prevention Program Managers of each of the state health departments (voting members) and the chairs of the workgroups. The committee has met monthly via teleconference call.
- The Advisory Committee - experts from the five member states. Additional Advisory Committee members have included representatives from the Centers for Disease Control, American Heart Association, American Stroke Association, and the National Stroke Association. The Advisory Committee has provided technical assistance and guidance to the Steering Committee and DSSN staff. They have met annually and have been called on as needed.
- The DSSN has accomplished its mission through the diligent service of five Workgroups, consisting of expert representatives from all five states.
  - Access to Care Workgroup
  - Data Support and Epidemiology Workgroup
  - Integration and Media Workgroup
  - Policy and Advocacy Workgroup
  - Training and Education Workgroup

## STRATEGIC PLAN IMPLEMENTATION

DSSN hosted a Strategic Planning Meeting in October 2008 to develop a strategic plan to implement regional stroke prevention and treatment interventions where the greatest leverage could be achieved. The meeting brought over 60 partners together from 30 various organizations to brainstorm and identify the strengths, weaknesses, opportunities and threats for the region. The outcome of the meeting was the development of a list of priorities for the five different workgroups, and the model from which the Strategic Action Plan was built.

The DSSN Strategic Action Plan fit within the framework of the DSSN Logic Model (see Appendix) and charted a two-year regional, collaborative process to increase the prevention and treatment of stroke, ultimately reducing the burden of stroke in the Delta States. The goals and objectives were designed to meet the CDC Best Practice model for strategic action planning. The objectives were specific, measurable, achievable, realistic, and time-bound. The DSSN Strategic Action Plan was implemented during the fiscal years 2009 and 2010.

## **ADMINISTRATION AND MANAGEMENT**

---

### **Functions and Areas of Concern**

- Strategic Planning
- Network Guiding Principles
- DSSN infrastructure
- DSSN membership recruitment and retention
- Support of workgroup initiatives
- Regional partnerships

### **Priority Areas of Focus 2009-2010**

- Finalize and publicize signed Interstate Regional Consensus Statement on Stroke agreement, facilitating collaboration and cooperation among the Health Departments in each DSSN state to jointly work to increase stroke awareness and enhance the impact of public health in addressing stroke prevention and quality of care.
- Produce and distribute an Executive Report on the DSSN, encompassing a summary of the projects and activities supported by and directed by the DSSN (FY 2004-2010).

## **ACCESS TO CARE WORKGROUP**

---

### **Functions and Areas of Concern**

- Major risk factor control
- Hypertension control
- Access to care and medication issues
- EMS system
- ER system
- Delta Stroke Telemedicine Network

### **Priority Areas of Focus 2009-2010**

- Promote and encourage telestroke networks across the region.
- Summarize state-level guidelines for transporting, routing, and triage of stroke patients (the process of prioritizing sick or injured people for treatment according to the seriousness of the condition or injury) and describe recommendations for regional guidelines.

## **DATA SUPPORT WORKGROUP**

---

### **Functions and Areas of Concern**

- Updated Burden Document, including a regional profile and analysis
- Assessment and evaluation tools
- Regional needs assessment
- Registry planning
- Coordinated data gathering across state lines

### **Priority Areas of Focus 2009-2010**

- Publish updated Delta Stroke Burden Document.
- Conduct regional needs assessment.

## **INTEGRATION AND MEDIA WORKGROUP**

---

### **Functions and Areas of Concern**

- Integrated work plans and projects of DSSN, State Heart Disease and Stroke Prevention Programs, State Task Forces, other national/regional partners and Stroke Networks
- Methods for keeping DSSN stakeholders in touch with each other for the exchange of information and plans
- Regional media and advertising messages, in collaboration with state HDSP programs and other state agencies

### **Priority Areas of Focus 2009-2010**

- Research existing regionally and culturally appropriate media materials.
- Identify or develop a set of coordinated messages.
- Recommend coordinated stroke related activities with existing entities across the region.

## **POLICY AND ADVOCACY WORKGROUP**

---

### **Functions and Areas of Concern**

- Reimbursement issues
- Model legislation for stroke related policies and issues
- Best practice guidelines
- Incentives and recognition programs
- State certification program similar to the JCAHO (Joint Commission on the Accreditation of Healthcare Organizations)

### **Priority Areas of Focus 2009-2010**

- Develop a map of all certified primary stroke centers in the DSSN region.
- Summarize strategies to improve systems of care at the federal and state level and describe recommendations for implementation of these strategies from a state-based perspective.

## **TRAINING AND EDUCATION WORKGROUP**

---

### **Focus and Areas of Concern**

- Professional education for 9-1-1, EMS, and dispatchers
- Professional education tools and resources for health care providers

### **Priority Areas of Focus 2009-2010**

- Develop a toolkit to train professionals on stroke, including signs and symptoms, treatment, and rehabilitation.
- Engage state and regional partners to disseminate the toolkits.

## ACCOMPLISHMENTS

- The DSSN developed an Interstate Consensus Statement on Stroke to formalize the commitment of each of the states' health departments to collaborate to implement projects and interventions that will reduce the burden of stroke in the region. (see Appendix)
- To identify gaps in access to stroke treatment, the DSSN developed a map of the certified primary stroke centers across the region. Stroke centers are medical facilities staffed by health care professionals with specific training in rapidly diagnosing and treating strokes. The stroke centers identified on the DSSN map received the Joint Commission's Certificate of Distinction for Primary Stroke Centers, certifying that they follow the best practices established by the Brain Attack Coalition's "Recommendations for the Establishment of Primary Stroke Centers." (see Appendix)
- In 2008, the DSSN collaborated with the Tennessee Department of Health and the Tennessee Hospital Association to fund the first telestroke project in Tennessee. A key training partner for this project was Vanderbilt University.
- The DSSN provided funding to Memorial Hospital at Gulfport in 2009 for a new telestroke project targeting the lower six counties in Mississippi. This was the first telestroke project in Mississippi. If successful, this program will be used in other rural or underserved Mississippi counties where there is significant delay in transporting stroke patients to certified stroke centers.
- In 2010, the DSSN provided funding to the Alabama Department of Public Health, Health Promotion and Chronic Disease Bureau, Cardiovascular Health Branch for the development of a the first telestroke project to address the lack of access to Stroke Neurologists and availability of stroke certified hospitals in rural Alabama, where significant delay in transporting stroke patients has been identified.
- The DSSN is finalizing state-specific "Legislative Policy Briefs" highlighting the burden of stroke, summarizing best practice strategies currently in place to improve stroke systems of care and describing recommendations for implementation of these strategies. The briefs are designed for use with legislators to help implement policy changes to improve stroke systems of care. Each State Health Department, Heart Disease and Stroke Prevention Program in the DSSN region will receive a packet of Legislative Policy Briefs specific to their state. All the briefs will be available on the DSSN website in June 2010.
- The DSSN is currently completing an Executive Report encompassing a summary of the projects and activities supported by and directed by the DSSN. The report will include a chapter from each of the workgroups, providing targeted recommendations to guide regional and state interventions to reduce the burden of stroke. Each State Health Department, Heart Disease and Stroke Prevention Program in the DSSN region will receive copies of the Executive Report, and the report will be available on the DSSN website in June 2010.

- The DSSN is developing a “Stroke Awareness and Education Toolkit for Healthcare Providers.” This electronic toolkit is designed to increase professional awareness and knowledge of stroke, including risk factors, signs and symptoms, triage and diagnosis, protocols for treatment, rehabilitation options, patient quality of care issues, and stroke prevention. The toolkit will also include resources for online professional education. An additional section on patient education will cover health literacy issues and resources for special populations. CD copies of the DSSN’s Stroke Awareness and Education Toolkit for Healthcare Providers will be distributed to each State Health Department, Heart Disease and Stroke Prevention Program in the DSSN region, and the electronic toolkit will be available on the DSSN website in June 2010.
- The DSSN will be publishing an updated report on the burden of stroke in the 5-state region. The 2010 Burden Document will be distributed to each State Health Department, Heart Disease and Stroke Prevention Program in the DSSN region and will be available on the DSSN website no later than December 2010.
- As one of its final projects, DSSN is conducting a hospital stroke survey across the region. Each State Health Department, Heart Disease and Stroke Prevention Program in the DSSN region will receive copies of the DSSN Hospital Stroke Survey, and the summary report will be available on the DSSN website no later than December 2010.



## **PARTNERS**

**The following partners have been represented on the DSSN Steering Committee, Advisory Committee, Workgroups, and/or provided technical assistance to the DSSN.**

Alabama Department of Public Health

Alabama Neurological Institute

American Heart Association/American Stroke Association

Arkansas Department of Health

Arkansas Foundation for Medical Care

Arkansas Medical, Dental and Pharmaceutical Association

Baptist Health Medical Center - Neurological Program (Arkansas)

Birmingham Regional EMS System

Brookwood Medical Center (Alabama)

Bunkie General Hospital (Louisiana)

Centers for Disease Control and Prevention

Community Health Centers of Arkansas, Inc.

East Jefferson General Hospital (Louisiana)

East Tennessee State University - Department of Public Health

East Tennessee State University - Professional Roles and Mental Health Department

Forrest General Hospital - Neurosurgery Unit (Mississippi)

Genetech, Inc.

Great Lakes Stroke Network (Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin)

HealthSouth Kingport (Tennessee)

Jackson National Heart, Lung, and Blood Institute Field Site (Mississippi)

Louisiana Department of Health and Hospitals

Memorial Hospital of Gulfport - Stroke Program (Mississippi)

Minnesota Stroke Partnership

Mississippi State Department of Health

National Stroke Association

Neurology Consultants (Tennessee)

North Mississippi Medical Center - Medicine Service Line Administration

North Mississippi Medical Center - Oncology/GI/GU/Stroke Medical Service Line

Northwest Regional Stroke Network (Alaska, Idaho, Montana, Oregon, and Washington)

Sparks Neurology Center (Arkansas)  
St. Thomas Neurology Group (Tennessee)  
Tennessee Department of Health  
Tennessee Primary Care Association  
Tennessee State University - Center for Health Research  
Tri-State Stroke Network (North Carolina, South Carolina, Georgia)  
University of Alabama at Birmingham - Department of Epidemiology  
University of Alabama at Birmingham - School of Public Health/Biostatistics  
University of Alabama at Tuscaloosa - College of Medicine  
University of Arkansas for Medical Sciences - Center for Distance Learning  
University of Arkansas for Medical Sciences - College of Public Health  
University of Arkansas for Medical Sciences - Delta Area Health Education Center  
University of Arkansas for Medical Sciences - Department of Neurology  
University of Louisiana  
University of Mississippi Medical Center  
University of South Alabama at Mobile - College of Medicine  
University of South Alabama at Mobile - Department of EMS Education  
University of South Alabama at Mobile - Stroke Center  
University of Tennessee Health Science Center - Stroke/Vascular and Critical Care Neurology Dept.  
University of Tennessee, College of Medicine  
Vanderbilt University Medical Center

## SPECIAL ACKNOWLEDGEMENTS

### STEERING COMMITTEE

---

State Health Department  
Heart Disease and Stroke Prevention  
Program Managers

Melanie Rightmyer, RN, BSN (AL)  
Linda Faulkner (AR)  
Jorli Wales (LA)  
Augusta Brown-Bilbro (MS)  
Debra Smith, MPH, CHES (TN)

Advisors

Susan Bland, MSHRM (AL)  
Chris Freeman (TN)  
Xavier Johnson, MPH (MS)  
Lewis Leslie (AR)  
Marisa Marino (LA)

DSSN Project Director

Namvar Zohoori, MD, MPH, PhD (AR)

Workgroup Chairs

Stacy Barbay (LA) *AHA*  
Joe Holley, MD, FACEP (TN)  
Lucy Im, MPH (AR)  
Jackie Moreland, RN, BSN, MS (TN)  
Matthew Valliere, MPA (LA)

DSSN Staff

Barbara Pauly (Project Manager)  
Brittany Johnson (Administrative Assistant)

### ACCESS TO CARE WORKGROUP

---

Joe Acker, EMT-P, MPH (AL)  
**Stacy Barbay (LA) *AHA* – Chair**  
Julie Hall-Barrow, EdD (AR)  
Martina Campbell (TN)  
Serina Carpenter, RN, MSN, CNRN (MS)  
Linda DeVille (LA)  
Patricia Erwin, RN, BSN, CEN, CMR (LA)  
Carla English *AHA*  
Linda Faulkner (AR)  
Tanya T. Funchess, MPH, MSM (MS)  
Karen George, RN, MSN (MS)  
Donald Hines, MD (LA)  
Praphul Joshi, BDS, MPH, PhD (LA)

Michael Kaminski, MD (TN)  
Salah G. Keyrouz, MD (AR)  
Barbara Kumpe (AR) *AHA*  
E. Eugene Marsh, MD (AL)  
Brenda Miller (TN) *AHA*  
Joe Phillips (TN)  
Martha Phillips, PhD (AR)  
William Pulsinelli, PhD, MD (TN)  
Jean Saunders (TN) *AHA*  
Chris Shelton, RN (AL)  
Margaret Tremwel, MD, PhD (AR)  
Jorli Wales (LA)  
Monique Wilson, MPH (AL) *AHA*

### DATA SUPPORT/EPIDEMIOLOGY WORKGROUP

---

Tim Aldrich, PhD, MPH (TN)  
Alok Bhoi, MBBS, MPH (LA)  
Candice Green, MPH (MS)  
Marsha Eigenbrodt, MD, MPH (AR)  
Meleisha Edwards, MS (TN)  
Elias Giraldo, MD (TN)

Baqar Husaini, PhD (TN)  
**Lucy Im, MPH (AR) – Chair**  
Marian Levy, DrPh, RD (TN)  
Fawaz Mzayek, PhD (TN)  
Sondra Reese, MPH (AL)

### INTEGRATION AND MEDIA WORKGROUP

---

Susan Bland, MSHRM (AL)  
Fred Callahan, MD (TN)  
Gerrelda Davis, MBA (LA)  
Robert Ley (TN)  
Jim McVay, DrPA (AL)

#### **Matthew Valliere, MPA (LA) – Chair**

Lee Voulters, MD (MS)  
Julie Womack (AR)  
Dusty Young, MPH (AL)

### POLICY AND ADVOCACY WORKGROUP

---

Tasha Bergeron, MSPH, RN (LA)  
Elizabeth Bostick (LA)  
Chris Freeman (TN)  
**Joe Holley, MD, FACEP (TN) – Chair**  
Howard Kirshner, MD (TN)  
Tracie Ramey, RN (MS)

Melanie Rightmyer, RN, BSN (AL)  
Jean Saunders (TN) *AHA*  
Angie Shaffner, RN (AR)  
Patricia Vanhook, PhD, FNP-BC, CNRN (TN)  
Evelyn Walker, MD, MPH (MS)  
Monique Wilson, MPH (AL)

### TRAINING AND EDUCATION WORKGROUP

---

Augusta Brown-Bilbro (MS)  
Pam Brown, RN, CPHQ (AR)  
Mike Guillot, EMTP (LA)  
Becky Hall, EdD (AR)  
Lanitra Harris (TN)  
Virginia Howard, PhD (AL)  
Xavier Johnson, MPH (MS)  
Jane Jumbelick, RN (TN)  
Sharon Logan (TN)

#### **Jackie Moreland, RN,BSN,MS (TN) – Chair**

Joe Phillips (TN)  
Melanie Rightmyer, RN, BSN (AL)  
Corley Roberts, MHA (TN) *AHA*  
Theresa Romano (MS)  
Debra Smith, MPH, CHES (TN)  
Heather Sudduth, OTL/L, CCM (MS)  
Monique Wilson, MPH (AL)

## **APPENDIX**

- DSSN Logic Model
- DSSN Interstate Consensus Statement on Stroke
- Map of the Certified Primary Stroke Centers in DSSN Region